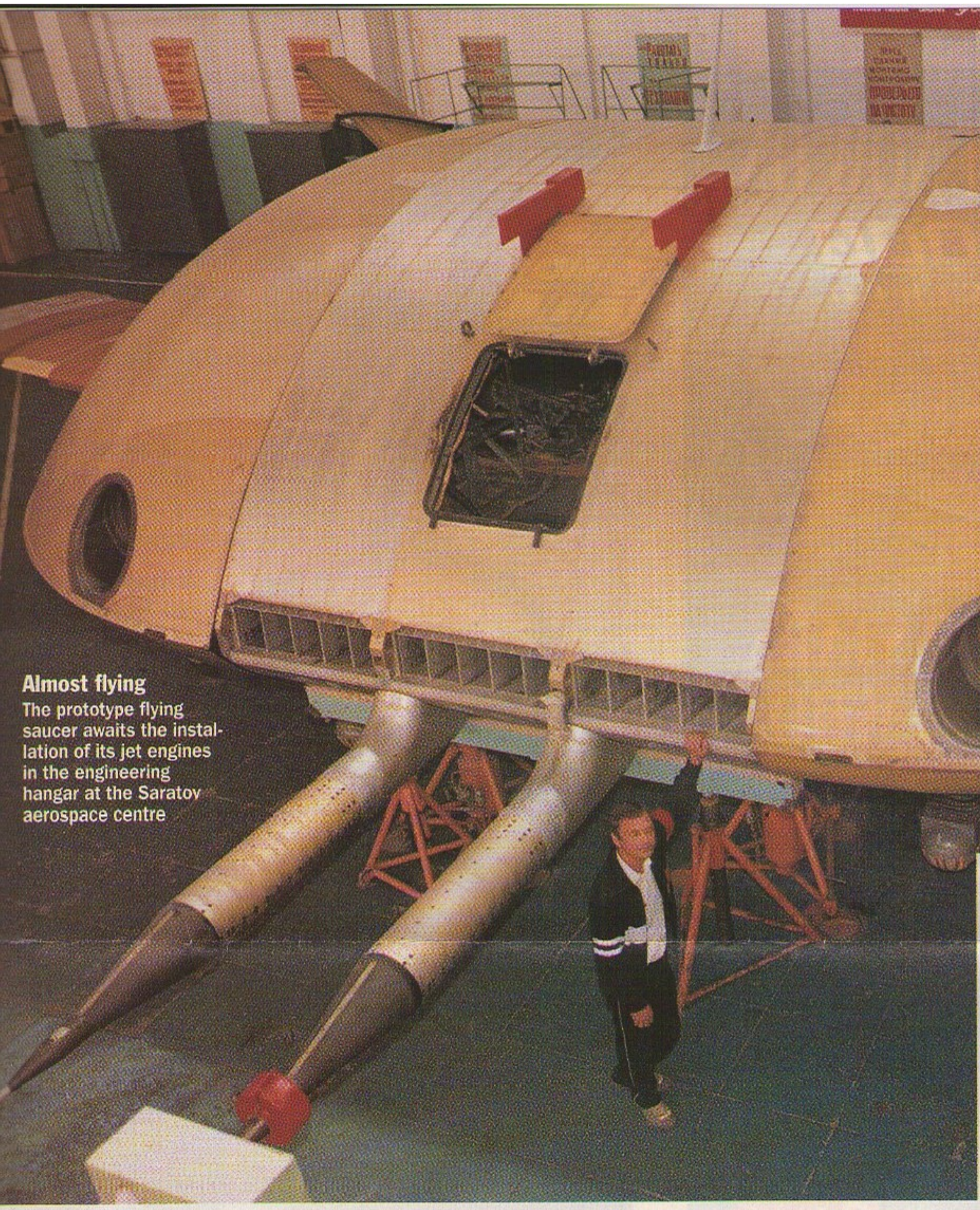
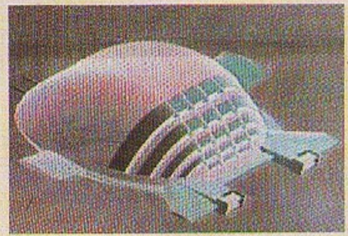


Almost flying
The prototype flying saucer awaits the installation of its jet engines in the engineering hangar at the Saratov aerospace centre

The saucer-shape of aircraft to come



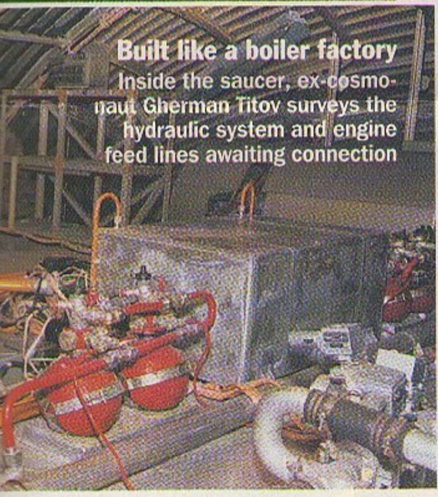
The prototype saucer is only the beginning of a revolution in commercial flight – *if* the funding arrives. In the Russian team's crude computer system are designs for much larger vehicles (left), and models of a 400-seater saucer craft have already appeared at air shows (below)

The flying sa

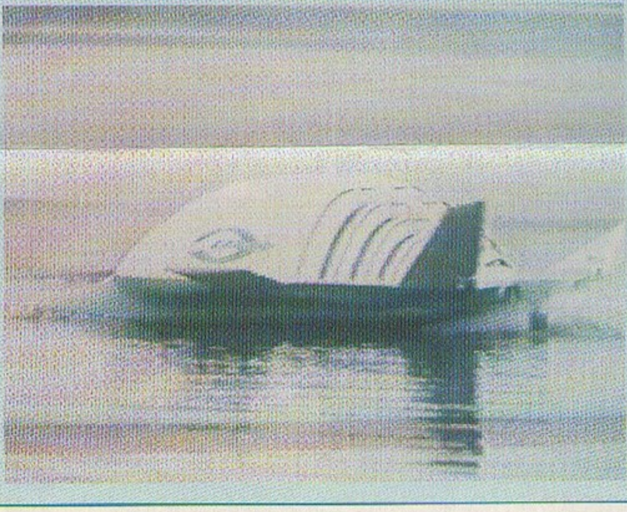
Built by alien Russians from outer Saratov, this genuine flying saucer could revolutionise air travel. All it needs now is money

There are probably no flying saucers, alien or otherwise, concealed in the hangars at Groom Lake, America's most secret air base. But in the drab and forbidding Russian town of Saratov, situated 400 miles south-east of Moscow, it's another story.

For here, in buildings that were formerly an aerospace research centre and once designated one of the Soviet Union's most closely guarded secrets, Russian engineers are busy constructing the world's first saucer that really does fly.



Built like a boiler factory
Inside the saucer, ex-cosmonaut Gherman Titov surveys the hydraulic system and engine feed lines awaiting connection



Ready for take off – from almost anywhere
Despite its amazing lifting capacity, the Tarielka flying saucer has no need of a runway, according to its designers. "It can take off and land on almost any surface, including water, in a distance of only 500 metres," they say. The full-scale version will be ten times larger than the two-tonne prototype seen making its maiden flight in these video images. Carrying 400 people, it will be able to cruise at 400 mph at an altitude of 36,000 feet, carrying enough fuel to make a non-stop flight of over 5000 miles

Photographs © Moscoop

cer that's built on earth

The saucer is entirely the product of human designers' imaginations. One of Russia's top rocket design teams, led by Lev Shukin – the engineer responsible for the Soviet effort in the 1974 Apollo-Soyuz space link-up mission – produced the very first blueprints of the revolutionary craft 15 years ago, under a cloak of military secrecy. But post-Cold War uncertainty kept the programme on ice until very recently, when a two-tonne prototype finally took to the air for the first time. Now the Russian team is looking for $70 million from Western companies to transform the flying saucer into a viable commercial aircraft.

The vehicle is called *Tarielka* – the Russian word for saucer – and in its commercial guise it will be equipped to carry up to 400 passengers – even though it is slightly smaller than a familiar 80-seater Boeing 737 jet. It is its uniquely efficient cargo-carrying capacity that has triggered the intense interest from aerospace companies in the flying saucer concept.

In fact, the saucer is a sort of "flying wing". Instead of a separate fuselage with wings generating lift, the entire body of the vehicle produces lift as the air flows around it. The stubby wings are there simply to provide control – over 80 per cent of the saucer's lift is generated by its body. Aerospace giant Airbus Industrie is investigating similar fat, stubby flying wings as a possible design for high-capacity passenger and cargo aircraft.

"Technically the shape of the aircraft is the most advanced the world has ever known," says Shukin. "It is a new concept in aerodynamics. It doesn't need wings or airfields. It is able to take off and land like a helicopter."

He dreams of fleets of luxury saucers able to accommodate 2000 passengers in flying hotels with on-board restaurants and individual cabins. But money is in short supply. Shukin's deputy, ex-cosmonaut Gherman Titov, says: "At the moment, no one wants to make long-term investments in Russian industry." *Matt Bacon* ■